IN THE CLAIMS

The current claims for this application are listed below:

1-6. (Cancelled)

7. (Previously amended) A method, comprising:

focusing a short pulse laser beam onto a particle defect on a wafer surface; and

ablating the particle defect with the short pulse laser beam, wherein the ablating causes the particle defect to undergo an explosive evaporation, the explosive evaporation comprising evaporation and fragmentation of the particle defect.

8. (Cancelled)

9. (Cancelled)

10. (Original) The method of claim 7, wherein focusing is to direct the laser beam so that a focal point of the laser beam contacts the particle defect at a low incidence angle.

11. (Original) The method of claim 7, wherein focusing is to direct the laser beam so that a focal point of the laser beam contacts the particle defect at an angle between about 5° to about 30° from the wafer surface.

12. (Original) The method of claim 7, wherein focusing is to position a focal point of the laser beam to be above the wafer surface at a distance approximately equivalent to the approximate radius of the particle defect.

13. (Original) The method of claim 7, wherein focusing is to position a focal point of the laser beam to be between about 1 μm to about 10 μm above the wafer surface.

14. (Original) The method of claim 7, wherein the particle defect has an approximate diameter of between about 1 μm to about 10 μm.

15. (Original) The method of claim 7, wherein the particle defect has a significant portion of its volume above the wafer surface.

16. (Original) The method of claim 7, further comprising:

scanning the surface of the wafer to gather data about the location and physical properties of the particle defects; and

aligning the laser beam according to the data.

17. (Previously amended) A system, comprising:

a particle defect detector to detect particle defects on a wafer surface; and

a particle defect ablator including a short pulse laser to cause explosive evaporation of the particle defects, the explosive evaporation comprising evaporation and fragmentation of the particle defects.

18. (Original) The system of claim 17, wherein the particle defect detector includes a low energy laser to detect the particle defects above the wafer surface and produce signals containing data about the particle defects physical properties and location.

19. (Original) The system of claim 17, wherein the particle defect detector includes a processing device to receive the signals and utilize the data.

20. (Original) The system of claim 17, wherein the processing device is to utilize the data to compute a coordinate map of the particle defects, and wherein the particle defect ablator is to utilize the coordinate map to align the short pulse laser to the particle defects on the wafer surface.

21. (Previously amended) The system of claim 17, wherein the processing device is to utilize the data to compute a particle-properties database containing physical properties about the particle defect and wherein the particle defect ablator is to utilize the particle-properties database to control power, time frequency pulsing, or other electronic functions of the short pulse laser.

22. (Original) The system of claim 17, wherein the particle defect ablator includes a femtosecond laser.

23. (Original) The system of claim 17, wherein the particle defect ablator is to provide a pulsed laser beam to the particle defect, the pulsed laser beam having an approximate time frequency between about 50 fs to about 500 fs.

24. (Cancelled)

25. (Previously amended) A method comprising;

scanning the surface of a wafer to gather data about location and physical properties of particle defects on the wafer surface; and

aligning and focusing a short pulse laser beam on particle defects to cause explosive evaporation of the particle defects, the explosive evaporation

comprising evaporation and fragmentation of the particle defects, the aligning and focusing being performed based on the data.

26. (Previously presented) The method of claim 25, wherein aligning and focusing is done automatically.

27. (Previously presented) The method of claim 25, further comprising:

computing a coordinate map of particle defects according to the data; and

utilizing the coordinate map to position a focal point of a laser beam upon the particle defects.

28. (Previously presented) The method of claim 25, further comprising:

computing a database of physical properties of the particle defects according to the data; and

utilizing the database of physical properties to control power, time frequency pulsing, or other electronic functions of the short pulse laser.

29. (Previously amended) The method of claim 25, further comprising:

computing a coordinate map of the location of particle defects based on the data;

computing a database of physical properties of the particles defects based on the data; and

storing the coordinate map and database in memory to be utilized subsequently to cause explosive evaporation of the particles defects.